Waste Burning Basics

ADEC Solid Waste Program

Burning waste is a great tool to

- Maximize landfill space
- Deter wildlife
- Reduce risk of leachate
- Reduce windblown litter

Risks of incorrect burning

- Releasing air pollution
- Wildfire

Key Concepts of Good Burning

- Burn in a burn unit
- Only landfill operator load and light
- Burn in appropriate weather
- Sort waste prior to burning
- Keep waste dry
- Burn in small batches
- Clean out the burn unit
- Monitor the burn
- Keep burning area clear of litter and brush
- Have fire suppression equipment onsite
- Control your pyromaniacs

Factors to Consider for Your Burn Unit

- Heavy equipment availability
- Population
- Cost
- Maintenance

Commercial vs. Homemade Burn Units

Commercially Constructed

- Professionally designed
- $35,000 - $120,000 plus shipping
- Allowable purchase under IGAP

Homemade

- Can be designed to specific community needs
- Construction costs low
- May not last as long as commercial

HOMEMADE BURN UNITS

"The City of McGrath has reduced the amount of household waste we bury by 95% with the use of the burn box. That means our landfill uses much less land burying ash compared with how much land would be needed if our waste was not incinerated."

McGrath AK Population: 324

"The burn unit here at Chuathbaluk Landfill was made of an old 10,000-gallon fuel tank that was decommissioned when the city got their new tanks some years back. It helps in reducing the paper waste from entering into our landfill and helps in the longevity of our landfill by burning the boxes and paper products that would've went into our cell and gives our landfill a longer life span for our current cell that we are using."

Chuathbaluk AK Population: 124

"The new burn unit has dramatically improved the overall quality of life in our valley by reducing emissions from our landfill. The people find it easier than burning on the ground. Our neighbors in Canada have less fumes crossing the boundary. The bears have moved back to the bush to live a more natural life and finally, I have much less waste to bury in the landfill."

Hyder AK Population: 87

"For us, creating this was a way of using local resources to do something to protect wildlife and the surrounding environment while also doing our job. The structure was entirely a homegrown effort and has helped us to see what can work on a longer term basis. This structure also helps us to know what is entering the waste stream versus uncontrolled access, which is entirely possible and evident when no structure exists."

Adak AK Population: 331

"This unit is made of a decommissioned fuel storage tank with 55 gallon fuel drum as a stack. Burnables were placed on top of steel mesh and piping to allow adequate airflow for a clean burn. The unit operated as expected until the roof caved in due to rust, 8 years after being made."

White Mountain AK Population: 202

"The burn unit is a trash compacting type dumpster. The stack is a piece of 18" culvert. Inside I made a platform from 2 inch pipe and set 4 inch crusher screen to allow air to flow under the trash. It does draft very well and burns down completely. This unit was built with mostly items from my yard as an experiment."

Tolsona AK Population: 30

Burning in a Trench

- Hard to separate waste
- If feasible have 2 trenches:
  1. Burnable waste
  2. Non-burnable waste

Only Operator Loads and Lights Unit

- Trained
- Has PPE
- Safety

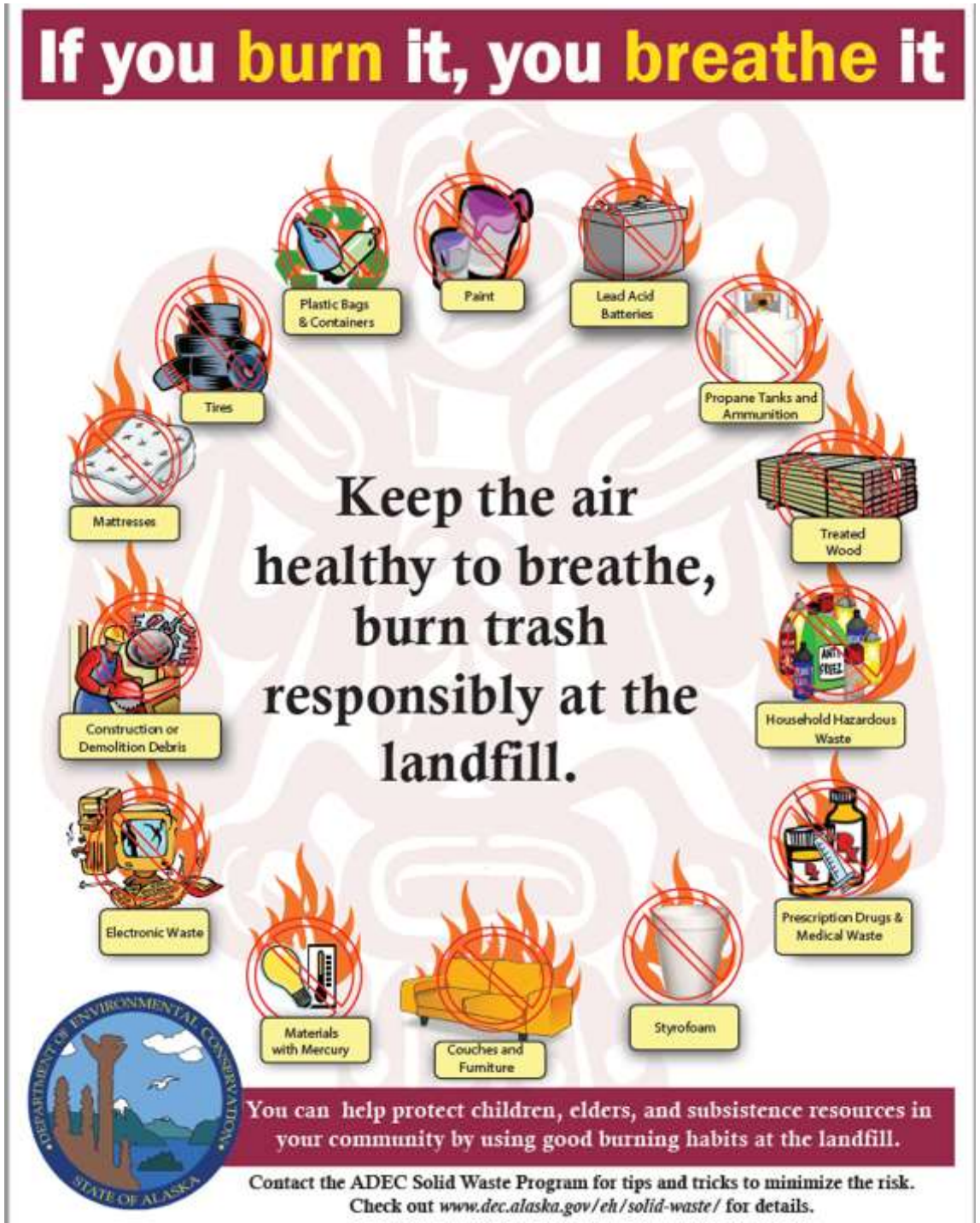
Burn in Appropriate Weather

- Wind direction
- Wind speed
- Inclement weather
- DNR burn suspension

Sort Out Nonburnable Waste Prior to Burning

These items are burnable:

- Cardboard
- Clean wood
- Paper
- Food waste
- Slash/brush



NEVER Burn:

- Electronics
- Glass
- Metal
- Foam
- Furniture

Waste should never create black smoke when burned!

Keep Waste Dry

- Burns hotter and faster
- Less leachate
- Won't get water in waste and freeze into a block

Burn in Small Batches

- Don’t overload the burn unit
- Burning smaller batches makes cleaning out easier
- Frequent burning = Better burning

Clean Out the Burn Unit

- Every cycle or every other burn cycle
- Clear air vent holes = Airflow
- Don’t let ash turn to concrete or freeze in the burn unit

Don’t put trash on top of ash

Monitor the Burn Cycle

- Watch for sparks and fly ash
- Don’t dump hot ash into trench
- Don’t open doors while in use
- Monitor for weather changes (wind)

Keep Burning Area Clear of Litter and Brush

- Fire buffer
- Wildfire prevention
- Fly ash control
- Trash attracts trash

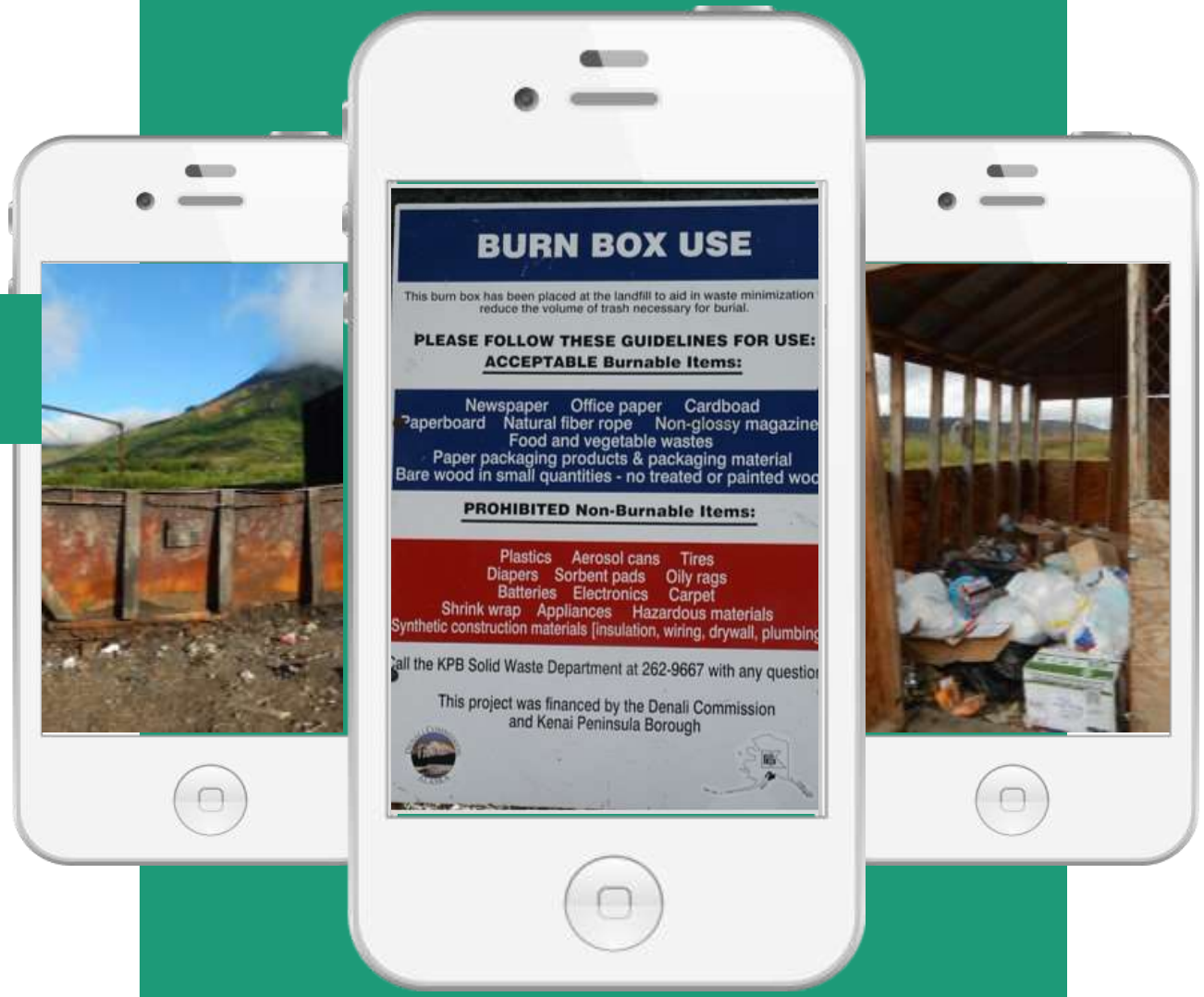
Have Fire Suppression Onsite

- Fire extinguisher
- Gravity fed system
- Interim Bulk Container with pump out

Every year fires escape rural Alaska landfills

- Risk to your community
- Risk to neighbouring communities
- Costs millions of dollars to fight fires
- Control your local pyromaniacs!

Trivia!



Name 3 Concepts for Good Burning

Answers

- Burn in burn unit
- Sort waste and keep dry before burning
- Burn in appropriate weather
- Landfill operator or designated person should load and light the burn unit
- Clean out the burn unit
- Keep burning area clear of litter and brush
- Burn in small batches
- Have fire suppression equipment onsite
- Monitor waste while burning


• PLACE ALL BURNABLE TRASH IN THE INCINERATOR
• NO BURNING DURING BURN SUSPENSIONS
• PLACE ALL NON-BURNABLE TRASH ON THE SURFACE

Questions?